Amendments to the Claims:

1-67. (canceled)

68. (currently amended) A method for altering the amino acid composition of a vegetative storage protein, ~~The method of Claim 58, wherein said vegetative storage protein~~ which is VSPβ, said method comprising:

a) introducing amino acid changes into said protein to create an engineered protein, wherein said amino acid changes alter the content of nutritionally essential amino acids in said protein by at least 5%; and

b) assessing the conformation of said engineered protein based on its ability to bind with a set of antibodies capable of binding with the native protein, wherein said antibodies recognize the native conformation of said protein.

69. (currently amended) A method for altering the amino acid composition of ~~a~~ VSPβ, said method comprising:

a) introducing amino acid changes into VSPβ to create an engineered VSPβ having increased nutritional value, wherein said amino acid changes increase levels of at least one nutritionally essential amino acid in the engineered VSPβ so that nutritionally essential amino acids are increased to represent at least 5% of the total amino acid content of the engineered VSPβ; and

b) assessing ~~whether said~~ the conformation of said engineered VSPβ ~~has the conformation of the native VSPβ~~ based on its ability to bind with a set of antibodies capable of binding with native VSPβ, wherein said antibodies recognize the native conformation of said native ~~VSPα,~~ VSPβ~~, or both~~.

70. (canceled)

71. (currently amended) The method of Claim [[58]] 68, wherein said antibodies are monoclonal antibodies.

72-74. (canceled)

75. (previously presented) The method of Claim 69, wherein at least one of said at least one nutritionally essential amino acid or nutritionally essential amino acids is methionine.

76. (previously presented) The method of Claim 69, wherein said amino acid changes are introduced into predetermined sites.

77. (previously presented) The method of Claim 76, wherein said predetermined sites are determined by secondary structure prediction or homology comparison.

78. (previously presented) The method of Claim 69, wherein said amino acid changes are introduced at random.

79. (previously presented) The method of Claim 78, wherein said amino acid changes are produced by mutagenic PCR or DNA shuffling, wherein said mutagenic PCR or DNA shuffling is optionally used in combination with phage display methodology.

80-125. (canceled)